

1. Antenna Specification/天线标准

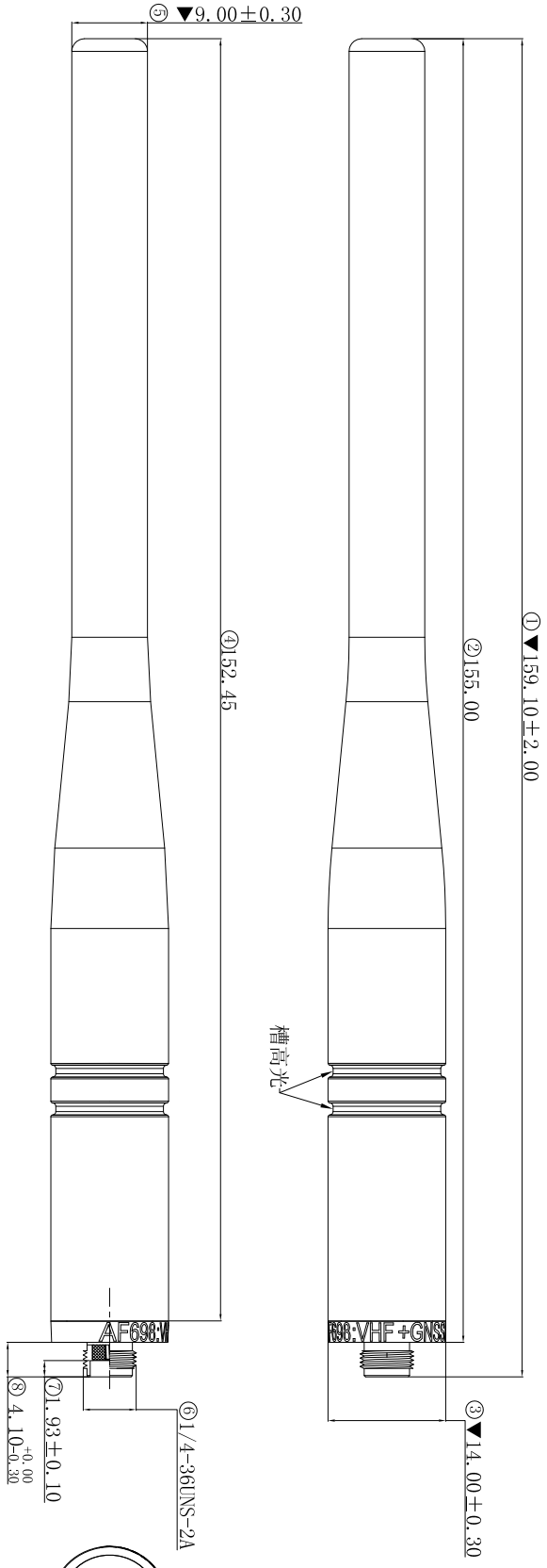
Antenna Specification/天线技术参数			
Electrical Specification/电气特性			
Item/目录	Specification/规格		Comment /备注
Freq. Range/频段范围	136 MHz-156MHz /1575±5MHz		
Impedance/阻抗	50 (Ω)		
Directional/辐射方向	Omni Directional		
Polarization/极化形式	Vertical		
VSWR/驻波比	≤4.5	≤2.5	
Peak Gain/峰值增益	/	0.9dBi	
Total Efficiency/无源效率	/	47%	
Test condition/测试条件	passive test (无源测试)		
Mechanical Specification/机械指标			
Antenna type/天线类型	Whip antenna		
Connector Type/连接器类型	SMA-K		
RF Cable Type/射频线型号	/		
Dimension/尺寸	OD14*159.10mm		
Salt Spray/盐雾测试	48(H)		
Environmental Specification /环境指标			
Operating temp/工作温度	-40°C ~ +80°C		
Storage temp/存储温度	-40°C ~ +80°C		

2. Antenna Picture/天线图片



海祥规格书

REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
X1	ECN23*	FIRST REASE	09/15'23	梁兑泉	丁第斌	牛宗星



备注:

1. 材质: 塑胶壳: TPU, 黑色. SMA连接器, 镀镍.
2. 天线频率范围: 136MHz-156MHz, VSWR ≤ 4.5 ; 1575 ± 5MHz, VSWR ≤ 2.5.

测试要求: 全检VSWR测试.
测试设备: 网分测试.
标有“▼”为QC重点检测尺寸.

3. 盐雾48H.
4. 有害物质须符合ECT 《QE-Q-19-001环境有害物质管理基准》管控标准.

NOTE:

1. Material: Plastic shell, TPU, black. SMA connector,
2. The antenna frequency range: 136MHz-156MHz, VSWR ≤ 4.5 ; 1575 ± 5MHz, VSWR ≤ 2.5.

Pattern test requirements: all inspection VSWR test.
Testing equipment: net points test.

3. Marked “▼” key size detection for QC.
4. Salt fog 48 h.
5. HSF shall conform to the standard QE-Q-19-001 Environmental Hazardous Substances Management.

镭雕字符说明

AF698: VHF+GNSS XX

产品型号

产品生产年份后两位, 例: 2023生产的镭雕23.

产品频致信息

字符字体: Tahoma, 字符高度: 1=2.20mm, 字符朝向: 字体顶部与配件进胶口&倒角面平行.

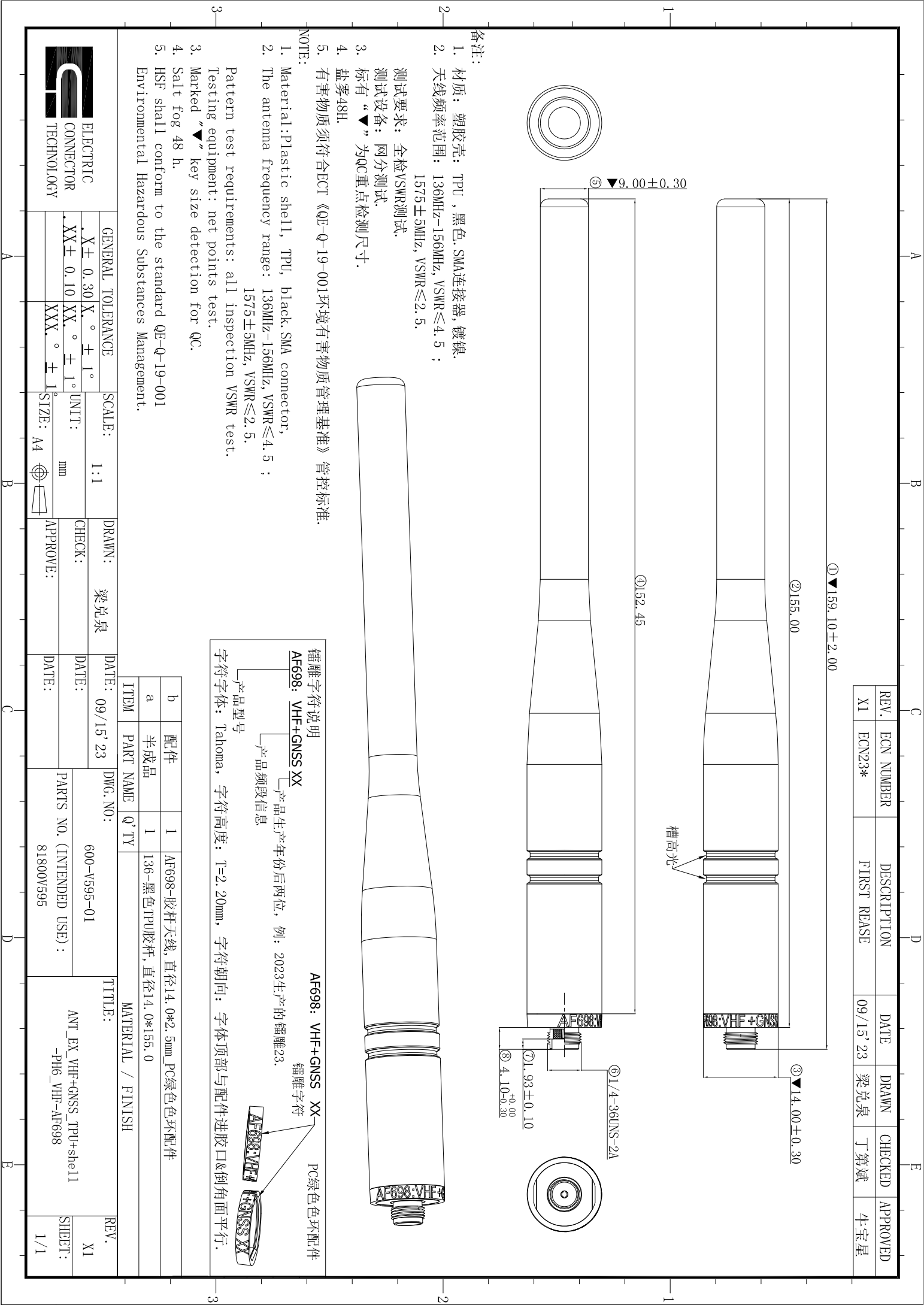
AF698: VHF+GNSS XX

镭雕字符

PC绿色色环配件

ITEM	PART NAME	Q'TY	MATERIAL / FINISH
b	配件	1	AF698-胶杆天线, 直径14.0*2.5mm_PC绿色色环配件
a	半成品	1	136-黑色TPU胶杆, 直径14.0*155.0

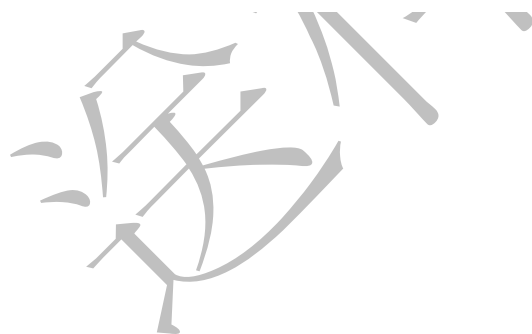
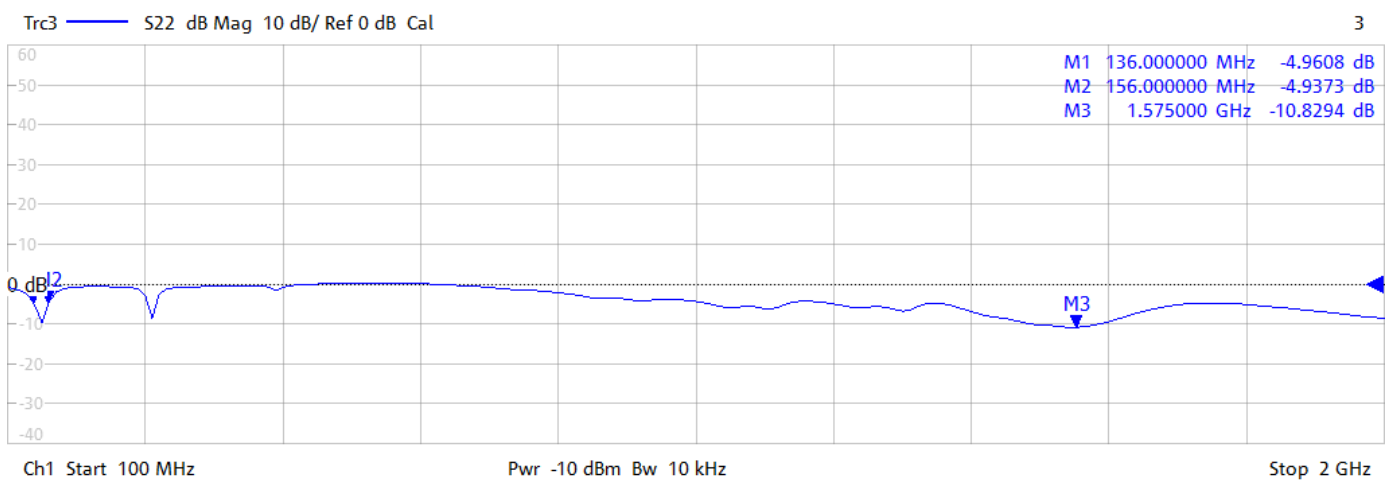
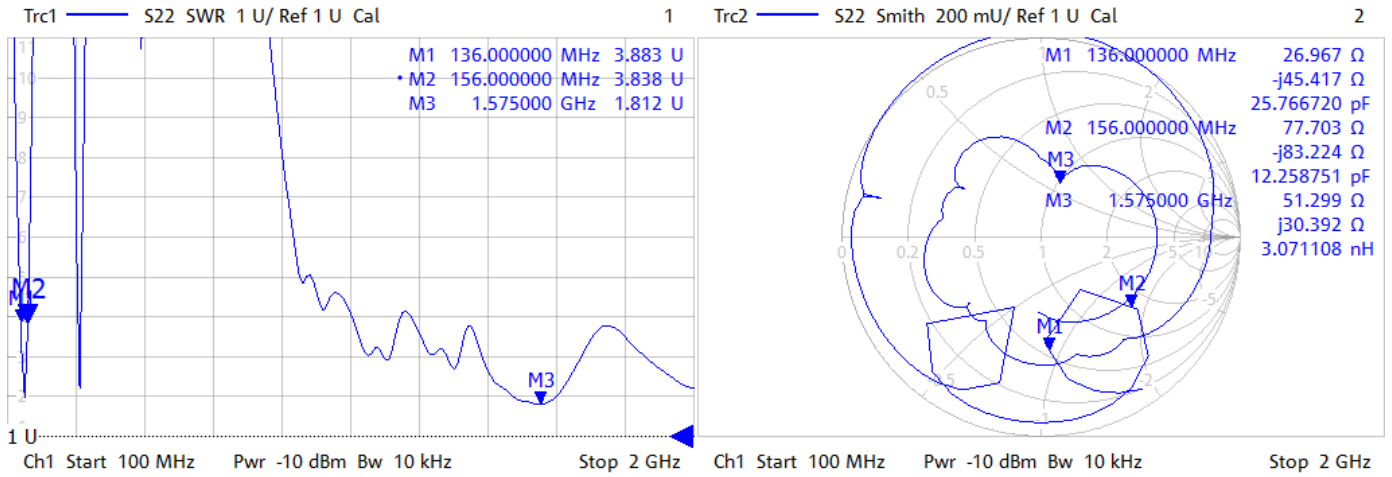
GENERAL TOLERANCE		SCALE:	DRAWN:	DATE:	DWG. NO.:	TITLE:	REV.
X ± 0.30	X ° ± 1°	1:1	梁兑泉	09/15'23	600-V595-01	ANT_EX_VHF+GNSS_TPU+shell	X1
XX ± 0.10	XX ° ± 1°	UNIT:	CHECK:	DATE:	PARTS NO. (INTENDED USE):	ANT_EX_VHF+GNSS_TPU+shell	
XXX ° ± 1°	SIZE: A4	mm	APPROVE:	DATE:	81800V595	-PH6_VHF-AF698	
SHEET:							1/1



4. Antenna test result/测试结果

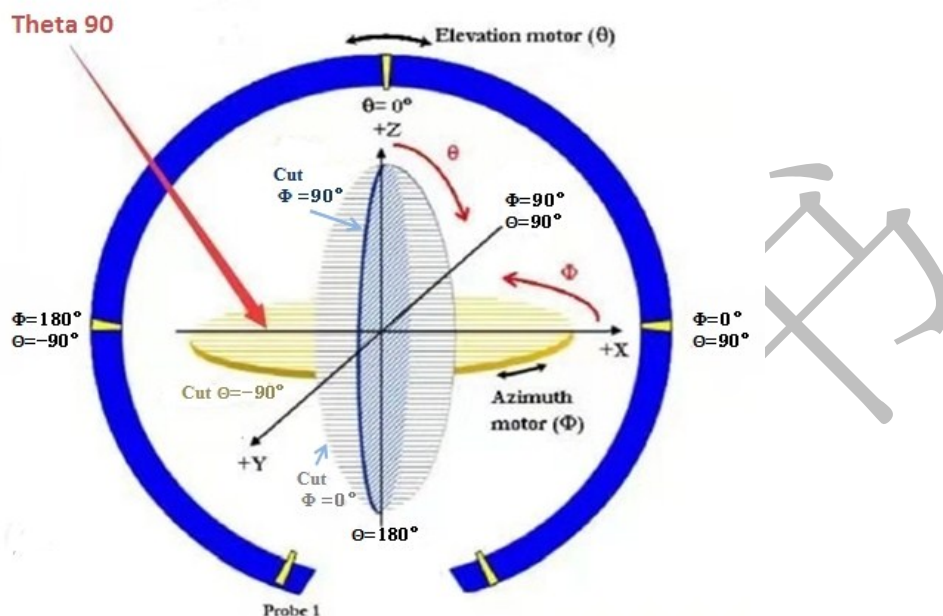
4.1 Return loss/Smith chart/VSWR/回波损耗/史密斯图/驻波比

9/15/2023 9:04:06 AM
1328.5170K92-101247-Tw

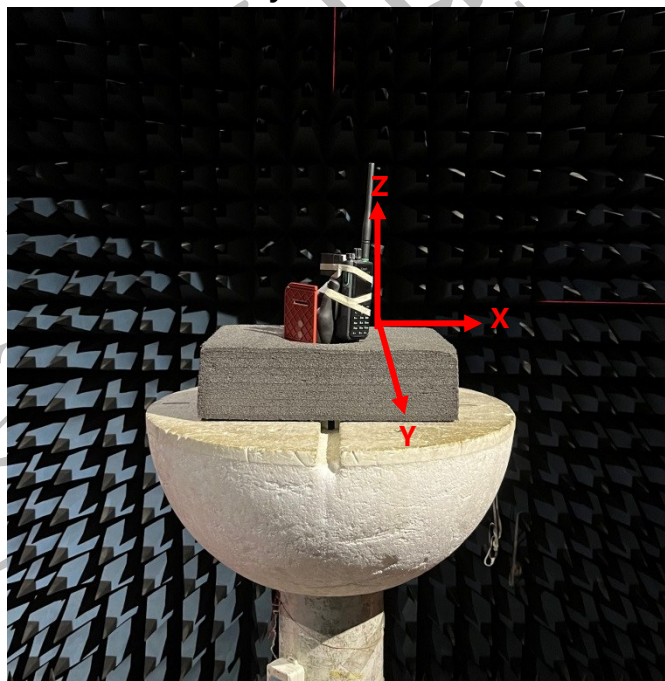


4.2 The gain and total efficiency test/增益和效率测试

4.2.1 The definition of coordinate system/坐标系定义-Satimo SG24



The coordinate system of Chamber/暗室坐标系



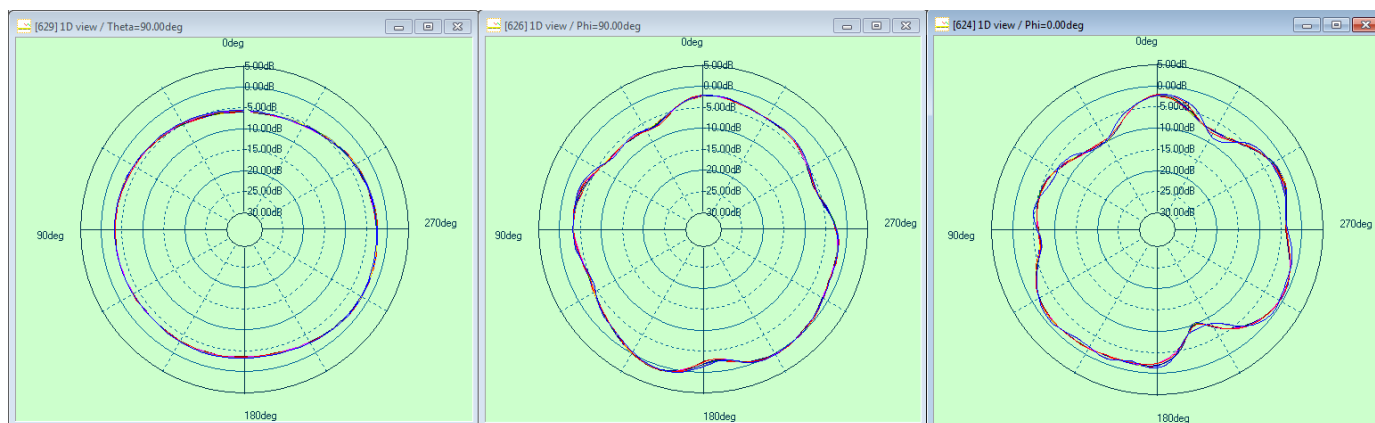
The production test position/天线测试放置位置

4.2.2 The test result of total efficiency and total gain/天线效率及增益测试结果**1570MHz-1580MHz**

Frequency (频率) / MHz	Efficiency (效率) / %	Gain (增益) / dBi
1570MHz	48%	0.7
1571MHz	48%	0.6
1572MHz	48%	0.6
1573MHz	47%	0.6
1574MHz	47%	0.6
1575MHz	46%	0.6
1576MHz	46%	0.7
1577MHz	47%	0.7
1578MHz	47%	0.8
1579MHz	47%	0.9
1580MHz	47%	0.9
AVG	47%	0.7

4.2.3 The antenna radiation pattern(2D View)/天线辐射方向图 (2D View)

1570MHz-1580MHz



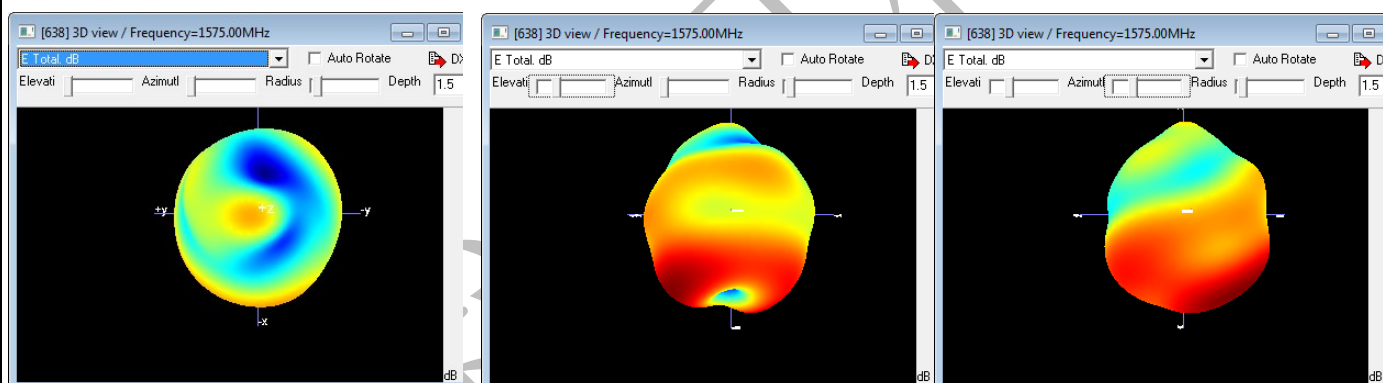
X0Y

Y0Z

X0Z

4.2.4 The antenna radiation pattern(3D View)/天线辐射方向图 (3D View)

1575MHz



X0Y

Y0Z

X0Z